

## Pre-Competitive Anxiety: A comparative study between «Under 12» and Senior teams in football

### Ansiedad Pre-Competitiva: Estudio comparativo entre equipos de fútbol infantil y fútbol senior

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**Abstract.** The present investigation intends to study if the importance and the difficulty of the game, if the pre-competitive anxiety (somatic and cognitive) and the levels of self-confidence in football were influenced by the competitive level (Under 12s and Seniors) and where the game took place (home / outside) and to verify the correlations between these variables. The sample was intentional and consisted of 85 male athletes, participants in the regional championship of «Under 12s» and Seniors. The «Under 12s» athletes (35) were aged between 11 and 12 years ( $M = 11.02 \pm 0.37$ ) and the Senior athletes (50) were aged between 18 and 35 years ( $M = 26.66 \pm 4.41$ ). The instrument used was the *Competitive State Anxiety Inventory* (CSAI-2) of Martens et al. (1990) and translated and validated into the Portuguese language by Raposo & Fernandes (2004). Regarding statistical procedures we tested the sample distribution through the Kolmogorov-Smirnov Test. For a normal distribution, we used the T-student parametric test for independent samples. Correlations between the variables were determined using the Pearson correlation coefficient, and we applied linear regression according to the variable's importance and difficulty of the games for both age groups. We also applied an inferential method based on the magnitude of effects through d-Cohen and r-Cohen. We adopted a significance level of  $p \leq 0.05$ . The results showed that, regardless of the competitive level (Under 12s or Seniors), athletes attributed high levels of importance and difficulty to games played both at home and outside. The levels of importance and difficulty of the games, as well as the levels of cognitive and somatic anxiety were higher in the Under 12s teams, although without significant differences compared to Seniors' teams, whereas the levels of self-confidence were significantly higher in the Seniors' teams. In both groups positive correlations were observed between the difficulty of the game and its importance, promoting these variables in general terms and in both levels an increase of anxiety and a decrease in self-confidence. The results were abounding that the importance and the difficulty of the games explain residually in the levels of Under 12s and Seniors the states of anxiety and self-confidence.

**Keywords.** Anxiety, Self-confidence, Football, Sports activity.

**Resumen.** El presente estudio tiene como objetivos verificar si la importancia del juego, la dificultad del juego, la ansiedad precompetitiva (somática y cognitiva) y los niveles de autoconfianza son influenciados por el escalón competitivo de los deportistas (infantiles / seniors) y por la localización de los juegos (casa / fuera), y conocer las correlaciones existentes entre la importancia, la dificultad del juego, la ansiedad (somática y cognitiva) y la autoconfianza. Participaron en el estudio 85 deportistas del sexo masculino, a competir en el campeonato distrital de fútbol, en los escalones de infantiles y seniors. Los deportistas infantiles (35) tenían edades comprendidas entre los 11 y 12 años ( $M = 11.02 \pm 0.37$ ) y los deportistas seniors (50) tenían edades comprendidas entre los 18 y 35 años ( $M = 26.66 \pm 4.41$ ). El instrumento utilizado fue el *Competitive State Anxiety Inventory* (CSAI-2), elaborado por Martens et al. (1990), traducido y validado al idioma portugués por Raposo y Fernandes (2004). En cuanto a los procedimientos estadísticos, probamos la distribución de los datos de la muestra a través del Kolmogorov-Smirnov Test. Para una distribución normal, utilizamos el test paramétrico t de Student para muestras independientes. Las correlaciones entre las variables se determinaron a través del Coeficiente de correlación de Pearson, aplicamos aún una regresión lineal en función de las variables importancia y dificultad de los juegos para ambos grupos de edad en análisis. También aplicamos el método de inferencias basadas en la magnitud de los efectos a través del d-Cohen y el r-Cohen. Adoptamos un nivel de significancia de  $p \leq 0.05$ . Los resultados mostraron que independientemente del escalón competitivo (infantiles o seniors) los deportistas atribuyeron niveles elevados de importancia y dificultad a los juegos realizados en casa o fuera de casa. Los niveles de importancia y dificultad de los juegos, así como los niveles de ansiedad cognitiva y somática fueron más altos en los equipos de fútbol infantil, aunque sin diferencias significativas en comparación con los equipos seniors, mientras que los niveles de autoconfianza fueron significativamente superiores en equipos del fútbol senior. En ambos escalones se observaron correlaciones positivas entre la dificultad del juego y la importancia del mismo, promoviendo estas variables, en términos generales y en ambos niveles un aumento de la ansiedad y una disminución de la autoconfianza. Los resultados fueron abundantes en cuanto a la importancia y la dificultad de los juegos que explican de manera residual los niveles de ansiedad y confianza en sí mismos en los niveles de infantiles y senior.

**Palabras-clave.** Ansiedad, autoconfianza, fútbol, actividad deportiva.

### Introduction

Sport has been, over time, referred to by different authors (Sagar, Lavalley, & Spray, 2007) as an activity that generates pressures that influence the increase of the levels of stress and anxiety, with reflexes in the sports performance, being able to be enhancer or weakening of the results obtained in the competition (Dias, Cruz, & Fonseca, 2009b).

According to Ozcan, Eniseler and Sahan (2018), authors such as Castro-Sánchez, Zurita-Ortega, Chacón-Cuberos and Lozano-Sánchez (2019) argue that cognitive factors such as

anxiety and motivational aspects are determinant to obtain good results in terms of performance when associated with technical-tactical aspects. The relationship between anxiety and sports performance raises doubts as can be observed in the study by Núñez and García (2017) who concluded, based on a systematic review, that there is still no empirical or experimental evidence to clarify the relationship between anxiety and sports performance, although Campos, Valdivia-Moral, Zagalaz, Ortega and Romero-Ramos (2017) and González and Fayos (2014) stated that high anxiety levels correlate negatively with sports performance. It is therefore important to continue studying this theme as a currently and emergent importance in relation to the athlete in competition (Ponseti, García-Mas, Cantallops & Vidal, 2017)

Studies show that anxiety levels are directly related to

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personal characteristics, self-confidence levels, gender, age, competitive experience and ability, and these are further influenced by the particularities of the competition, such as type, nature, importance, level of the opponent, or from involvement (internal and external pressures) (Neil, Mellalieu & Hanton, 2006; Jones, Meijen, McCharty & Sheffield, 2009; Ponseti, 2017). The previous observation demonstrates that anxiety-related issues are determinant in sports practice as they constitute a complex and multifactorial process (Nascimento Junior, Gaignon, Nakashima & Vieira, 2010). One of the factors that seems to have influence on pre-competitive anxiety are the personal characteristics and experience of the athletes. In this study, Ruiz-Juan and Zarauz (2014) based on the studies of different authors (Mellalieu, Hanton & O'Brien, 2004; Arbinaga & Caracuel, 2005) with lower level of sports development, present higher levels of anxiety. This finding is defended by Detanico and Santos (2005), who concluded that the level of anxiety is related inversely with the amount of time spent practicing, with experience and with the number of competitions in which the athletes participated. The above-mentioned authors point to the fact that older and more experienced individuals are accustomed to dealing with competitive situations, which reduces anxiety levels. Bicalho, Melo, Boletini, Costa and Noce (2016) based on Dos Santos, Coelho, Keller and Stefanello (2012), add that more experienced athletes evaluate situations with less intensity than younger athletes. their anxiety states are usually lower. Fernandes, Nunes, Raposo and Fernandes (2014) report that practitioners with low competitive experience were also more predisposed to lower levels of self-confidence. Munhóz and Teixeira-Arroyo (2012) add however, that further studies are needed in order to increase reliability in this type of conclusion.

The timing of the competition, the characteristics of the environment where the athlete is competing or the opponent's ability also interfere with their anxiety levels. For Silva, Enumo and Afonso (2016), anxiety levels are higher in periods close to competitions, due to uncertainties regarding performance, fear of opponents and much intrinsic and environmental expectation. Ruiz-Juan and Zarauz (2014) based on the works of Jaenes, (2000) and Arbinaga and Caracuel (2005) indicate that the environment where the athlete is competing or the type and characteristics of the test or location of the game can interfere in their levels of anxiety (Terry, Walrond & Carron, 1998; Courneya & Carron, 1992) and are decisive, being related to the greater probability of victory, having the psychological state and the behavioural state of the athletes influencing this fact. Saavedra, Gutiérrez, Fernández and Sa (2015) report that studies of Clarke and Norman (1995), Pollard and Pollard (2005), Wolfson, Wakelin and Lewis (2005) show that factors such as public influence, and better knowledge of the terrain can be important and influence the attitude of the players, lowering their levels of anxiety. Fernandes and Nunes (2006) report that athletes who compete for competitions away from home tend to have higher levels of pre-competitive anxiety.

The importance of competition or the perception of complexity may also influence levels of anxiety. In their study, Ribeiro, Dias, Cruz, Corte-Real and Fonseca (2014) reported that athletes perceiving competition as being of high

complexity evidenced higher levels of anxiety. Munhóz and Teixeira-Arroyo (2012), based on the studies of Román and Savoya (2003), report that anxiety levels tend to increase with the importance of the competition, however, they add that there is no concrete evidence of the level of competition as a determining factor for the increase in anxiety levels in athletes.

Regarding the correlations between the variables of anxiety and self-confidence, Martens (1982) stated that self-confidence correlates negatively with cognitive and somatic anxiety. According to the author, as the values of anxiety and self-confidence are related, whenever there is an increase in anxiety values, a decrease in self-confidence may be expected. More recently, Munhóz and Teixeira-Arroyo (2012) report that psychological states such as motivation and self-confidence correlate positively with anxiety states. Fernandes et al. (2014) concluded in their study that cognitive anxiety and somatic anxiety correlated positively with each other, and that self-confidence correlated inversely with anxieties (cognitive and somatic). In their studies with elite and sub-elite athletes, Souza, Teixeira and Lobato (2012) report that Lundqvist, Kentta and Raglin (2011) concluded that there is a strong link between low levels of state anxiety and high levels of self-confidence. Vinhais (2013) in a study where somatic anxiety, cognitive and self-confidence in the pre-competitive period in athletes of various modalities, concluded that there is a significant negative correlation between cognitive anxiety and self-confidence, as well as between somatic anxiety and self-confidence. These negative correlations indicate that when cognitive anxiety or somatic anxiety increases, self-confidence decreases and vice versa. Neil, Mellalieu and Hanton (2006) even report that the greater the cognitive anxiety in games, the greater the somatic anxiety.

The state of the art on issues related to stress and anxiety in football have allowed us to verify that it has been a very vast and diverse field in terms of research. However, although Neil, Mellalieu and Hanton (2006) suggest that the competitive level may influence the state of anxiety, few studies have sought to study the differences in pre-competitive anxiety states between children and adults, as well as the relationship between games played on the home ground (home games) and on the opponent's field (away games). The objective of this study was to verify if the importance of the game, the difficulty of the game, the precompetitive anxiety (somatic and cognitive) and the levels of self-confidence in football were influenced by the competitive level (Under 12s / seniors) and game location (home / away) and to verify the correlations between these variables. The present study aims to verify if the importance of the game, the difficulty of the game, the precompetitive anxiety (somatic and cognitive) and the levels of self-confidence are influenced by the competitive level of the athletes (children / seniors) and by the location of the games (home / away), and to know the correlation between importance, difficulty of play, anxiety (somatic and cognitive) and self-confidence.

## Materials and methods

A study of quantitative typology, with cross-sectional reference, because a single data collection was performed.

Cross-sectional research, according to Rouquayrol (1994), consists of an epidemiological study in which factor and effect are observed at the same historical moment and, currently, it has been the most used type of research in this field. It is also exploratory, since it intends to determine the relation that can exist between specific occurrences (Cohen, Manion & Morrisom, 2000).

### **Participants catherization**

The sample was intentional and consisted of 85 male football players, participants in the regional football championship. The «Under 12s» athletes (35) were aged between 11 and 12 years of age ( $M = 11.02 \pm 0.37$ ) and the Senior athletes (50) were aged between 18 and 35 years of age ( $M = 26.66 \pm 4.41$ ).

All the participants trained at least twice a week, with a competition at the weekend. Each training session lasted at least 60 minutes. The study included individuals who met the following criteria:

- I. Term of informed consent signed, in the case of minors under 18, by the parents;
- II. Being registered in the Portuguese Football Federation, in the respective level;
- III. Individuals without diagnosis of some pathology / psychological / depressive / anxiety disorder.

### **Instruments**

The instrument used was the *Competitive State Anxiety Inventory* (CSAI-2), developed by Martens et al. (1990), and translated and validated into Portuguese by Raposo and Fernandes (2004). This test aims to evaluate the cognitive and somatic components of pre-competitive state anxiety and a third component that is self-confidence. The CSAI-2 is a multidimensional measurement instrument, with 27 questions, which aims to diagnose and quantify 3 psychological variables: cognitive anxiety (9 items) ex: I am worried about this competition, somatic anxiety ex: I feel nervous ( 9 items) and self-confidence (9 items) ex: I have confidence in myself. Each question presents four hypotheses of response on a Likert scale of four values, each of them being quantified from 1 to 4 as follows: never, 1 (one); a little, two (2); moderate, three (3); very, four (4). This score is reversed in question 14 (fourteen). The score that can be obtained varies between 9 (nine), which corresponds to the lowest value, and 36 (thirty-six) that corresponds to the highest value. The highest score or scores on each scale reflect the highest levels of cognitive anxiety, somatic anxiety, and self-confidence.

Two questions were added to the instrument used in a 9-point scale ranging from 1 (none) to 9 (a lot) adopted by Ferreira (2006). This evaluation measured the importance and difficulty given to the different games of the teams (games at home and outside).

### **Procedures in Data Collection**

The instrument was administered as close as possible to the beginning of the competition (30 minutes before the game) in a calm and conducive environment in order for the players to concentrate on this task, following the advice of the authors who conceived the CSAI-2 (Martens, et al. 1990).

The questionnaire was self-administered by the athletes with the presence of the main researcher of this study, in the teams' changing rooms. The approach was always carried out in pre-competitive moments organised in advance with the coaches of the teams and with their proper authorization. To evaluate the degree of internal consistency of the items belonging to this instrument, we applied the *Cronbach's Alfa test*, showing high reliability for values greater than or equal to 0.80 (Cubo-Delgado, Martin-Marín & Ramos-Sanchez, 2011). In a second phase we used descriptive techniques, arithmetic mean (M) and standard deviation (SD), absolute and relative frequency and a range of variables of the study and comparative statistical techniques. In a third step we started by testing the distribution of the sample data through the Kolmogorov-Smirnov Test. As the sample showed a normal distribution, we used the *T-Student* parametric test for independent samples. The correlations between the study variables were determined using the parametric correlation test «*Pearson's correlation coefficient*», and a linear regression was chosen based on the variables' importance and difficulty of the games for both age groups. Here we obtain an interpretation and a practical meaning, which is presented as a correlation value, its signal and the coefficient of determination, getting by these the strength and direction between variables (Espírito Santo & Daniel, 2017). A significance level of  $p < 0.05$  (5%) was adopted with a confidence interval of 95%. To complement the analysis of the differences between groups, we performed the inferences method based on the magnitude of the effects. The intervals to classify the magnitude of the effects (d Cohen) were as follows:  $< 0$ : Adverse Effect; 0.0 to 0.1: No Effect; 0.2 to 0.4: Small Effect; 0.5 to 0.7: intermediate effect; 0.8 to 0.9: Large Effect; 1 and higher: strong effect (Cohen, 1988; Hattie, 2009). For the analysis between the two correlations we used the following categories for the interpretation of  $r$  value:  $< 1$ : no effect; .1 to .3: small effect; .3 to .5: intermediate effect;  $> .5$ : large effect (Cohen, 1988; Hattie, 2009).

### **Results**

From the reliability analysis through *Alfa Cronbach* calculation we obtained very high values of internal consistency, presenting cognitive anxiety  $\alpha = 0.92$ , somatic anxiety  $\alpha = 0.91$  and self-confidence  $\alpha = 0.94$ . The results evidenced in the study show that, regardless of the competitive level («under 12s» and Seniors), athletes attributed high levels of importance and difficulty to the games in which they participated, once values above 8 points were obtained for importance levels (8, 03 and 8.59 respectively) and 7 points for difficulty levels (7.00 and 7.51 respectively). We can also observe when we compare the results, that there are significant differences in the degree of importance ( $p = .001$ ) and difficulty ( $p = .028$ ) among the athletes belonging to both teams, where the «under 12s» athletes have higher levels of importance and difficulty recordings in terms of magnitude of effect, respectively in the variable importance a high effect ( $d = .512$ ) and in the variable difficulty a small effect ( $d = .347$ ).

Concerning anxiety levels, we can observe that both cognitive anxiety ( $M = 19.42$  and  $M = 20.15$ ) and somatic



Table 1  
Mean values, standard deviation, differences and effect sizes between groups in comparative analysis of importance, difficulty attributed to competitions, anxiety states and self-confidence according to the competitive level.

	Level	Mean	S.D.	P	d Cohen	a
Importance	Seniors	8,03	1,296			
	"under 12s"	8,59	0,729	.001***	.512**	
Difficulty	Seniors	7,00	1,499			
	"under 12s"	7,51	1,433	.028*	.347*	
Cognitive anxiety	Seniors	19,42	4,758			.92
	"under 12s"	20,15	5,179	.340	.148	
Somatic anxiety	Seniors	15,64	4,368			.91
	"under 12s"	16,13	4,395	.479	.112	
Self-confidence	Seniors	30,67	4,247			.94
	"under 12s"	28,96	3,969	.008**	.375*	

\*  $p = 0,05$  \*\*  $p = 0,01$  \*\*\*  $p = 0,001$

Effect sizes (d Cohen) IC 95%: < 0: Adverse Effect; 0.0 to 0.1: No Effect; \* 0.2 to 0.4: Small Effect; \*\* 0.5 to 0.7: intermediate effect; \*\*\* 0.8 to 0.9: Large Effect; 1 and higher: strong effect.

anxiety ( $M = 15.64$  and  $M = 16.13$ ) present intermediate values in both competitive levels, which are slightly higher among athletes in the «under 12s» level. At the level of anxiety (somatic and cognitive) there were no statistically significant differences between the study levels. Levels of self-confidence were high at both competitive levels ( $M = 30.67$  and  $M = 28.96$ ), with significantly higher values for the senior athletes ( $p = .008$ ) and a small size effect ( $d = .375$ ). The comparison of the importance, difficulty attributed to the competitions and states of anxiety and self-confidence according to the competitive level considering the home and away games, we verified by the analysis of table 2, which both athletes («under 12s» and seniors) attributed high levels of importance and difficulty to home and away games. Athletes at both levels considered away games with higher levels of difficulty and importance, although there were no significant differences at any of the levels. As for the magnitude of the effects, there were small effects on the senior level regarding the difficulty ( $d = .357$ ), as well as on the Under 12s level regarding the importance ( $d = .352$ ). Concerning anxiety levels, senior athletes revealed higher levels of cognitive anxiety and lower somatic anxiety levels in away games, while senior athletes showed higher levels of cognitive and somatic anxiety in games played at home. No significant differences were found in anxiety levels at any of the levels when compared to games played at home and away.

As for levels of self-confidence, both levels were higher at away games, although no significant differences were observed. There were only magnitudes of the effect on the Under 12s level between games played at home and away, with intermediate effects on cognitive anxiety ( $d = .780$ ) and somatic anxiety ( $d = .795$ ). Levels of self-confidence in both levels were higher in games played away, although no significant differences were observed. There is an intermediate effect on the Under 12s level ( $d = .702$ ).

As for the correlations between the different study variables, we can observe from table 3 that in the «under 12s»

Table 2  
Mean values, standard deviation and differences between groups in comparative analysis of importance, difficulty attributed to competitions, anxiety states and self-confidence according to the competitive level considering games performed at home and away from home.

		Seniors				Under 12			
		Mean	S.D.	p	d Cohen	Mean	S.D.	p	d Cohen
Importance	Home	7,98	1,450			8,51	.804		
	Away	8,08	1,127	.695	.077	8,75	.532	.924	.352*
Difficulty	Home	6,74	1,411			7,57	1,557		
	Away	7,27	1,554	.080	.357*	7,38	1,173	.075	.138
Cognitive anx.	Home	19,04	4,508			21,43	5,034		
	Away	19,81	5,022	.425	.161	17,67	4,603	.636	.780**
Somatic anx.	Home	16,04	4,361			17,19	4,533		
	Away	15,23	4,382	.361	.185	14,04	3,290	.378	.795**
Self-confidence	Home	30,62	4,379			28,06	3,824		
	Away	30,73	4,150	.900	.026	30,71	3,724	.201	.702**

\*  $p = 0,05$  \*\*  $p = 0,01$  \*\*\*  $p = 0,001$

Effect sizes (d Cohen) IC 95%: < 0: Adverse Effect; 0.0 to 0.1: No Effect; \* 0.2 to 0.4: Small Effect; \*\* 0.5 to 0.7: intermediate effect; \*\*\* 0.8 to 0.9: Large Effect; 1 and higher: strong effect.

level no statistically significant correlation was found between the importance attributed to games and their degree of difficulty, anxiety (cognitive and somatic) or self-confidence. There was also no statistically significant correlation between difficulty attributed to playing and anxiety (cognitive and somatic) and self-confidence. We find, however, in this level a statistically significant positive correlation between cognitive anxiety and somatic anxiety and a statistically significant negative correlation between cognitive anxiety and self-confidence and between somatic anxiety and self-confidence. The results revealed in both levels that the greater the cognitive anxiety, the greater the somatic anxiety, and that the greater the cognitive anxiety or somatic anxiety the less self-confidence.

Table 3  
Level of significance of the correlations, correlation coefficient and effect sizes of the "under 12s" and senior teams between importance, difficulty, states of anxiety and self-confidence.

		Correlation coefficient	Correlation coefficient	r
Importance	Difficulty	.215	.478	.302**
	Cognitive anx.	.047	.016	.031
	Somatic anx.	.088	.142	.055
	Self-confidence	-.055	.073	.128*
Difficulty	Cognitive anx.	.064	.182	.120*
	Somatic anx.	-.137	.235	.377**
	Self-confidence	-.069	-.102	.033
Cognitive anx.	Cognitive anx.	.636	.532	.158*
	Somatic anx.	-.241	-.444	.231*
Somatic anx.	Self-confidence	-.300	-.525	.274*

\*  $p = 0,05$  \*\*  $p = 0,01$  \*\*\*  $p = 0,001$

Effect sizes (r of Cohen) IC 95%:  $r < .1$ : no effect; \* .1 to .3: small effect; \*\* .3 to .5: intermediate effect; \*\*\*  $> .5$ : large effect.

Regarding the senior level, no statistically significant correlation was found between the importance attributed to playing and anxiety (cognitive and somatic) or self-confidence. We also found no statistically significant correlation between the difficulty attributed to playing and cognitive anxiety and self-confidence, however, we can observe a statistically significant positive correlation between importance and difficulty attributed to games, between difficulty attributed to playing and somatic anxiety and between cognitive anxiety and somatic anxiety. On the other hand, we found a statistically significant negative correlation between cognitive anxiety and self-confidence and between somatic anxiety and self-confidence. At the level of magnitude of effects through *Cohen's r*, between the values of two correlations, there were intermediate effects between the importance and difficulty variable ( $r = .302$ ) and between somatic anxiety and difficulty ( $r = .377$ ). There were also small effects between importance and self-confidence ( $r = .128$ ), difficulty and cognitive anxiety ( $r = .120$ ), cognitive anxiety and somatic anxiety ( $r = .158$ ), cognitive anxiety and self-somatic anxiety and self-confidence ( $r = .274$ ). These results show that the higher the importance given to the game, the higher the interpretation will be regarding its degree of difficulty, the greater the difficulty attributed to the game, the greater the somatic anxiety will be of the athletes and the greater the cognitive anxiety and somatic anxiety. We can

Table 4  
Linear regression of the variable's importance and difficulty of games on the states of anxiety and self-confidence according to the age group.

		SENIORS			
		Under 12s			
		Beta	R <sup>2</sup>	Beta	R <sup>2</sup>
Importance	Cognitive anx.	.047	.002	.016	.001
	Somatic anx.	.088	.008	.142	.020
	Self-confidence	-.055	.003	.073	.005
Difficulty	Cognitive anx.	.064	.004	.182	.033
	Somatic anx.	-.137	.020	.235	.055
	Self-confidence	-.069	.005	-.102	.010

also state that the greater the anxiety (cognitive and somatic) the less self-confidence of the athletes. In Table 4 we observe the values obtained through the application of a simple linear regression having as independent variables the importance and difficulty of the games according to each of the age groups under analysis.

We observed that due to the variable importance, the variance of the states of anxiety and self-confidence does not exceed 2% in somatic anxiety in the senior level. Although the percentage of explanation of the variance of the results is also reduced, the difficulty has a greater influence on the variables, namely 2% in somatic anxiety in the infant stage, 3.3% in cognitive anxiety and 5.5% in somatic anxiety in the step of seniors. Self-confidence is practically explained by residual importance and difficulty in both age groups.

## Discussion

Based on the objectives outlined in the present study, we present the discussion of the main results according to our literature

This study aimed to verify if the importance of the game, the difficulty of the game, the precompetitive anxiety (somatic and cognitive) and the levels of self-confidence in football were influenced by the competitive level (children / seniors) and by the location of the games home / away ) and to verify the correlations between these variables.

Athletes attributed high levels of importance and difficulty to the games in which they participated, with levels of importance being significantly higher by the athletes in the «under 12s» level, with a magnitude of the high effect being also the variable of importance. Studies developed in Portugal, by other authors (Sousa et al., 2008) corroborate our results, since in these studies importance and difficulty were also attributed to the games where the athletes participated.

The cognitive and somatic anxiety levels of the «under 12s» football athletes were higher, but the differences were not significant when compared to the athletes of the senior level. Levels of self-confidence were raised by both competitive levels but were significantly higher in senior athletes. The levels of anxiety and self-confidence are in line with Neil, Mellalieu and Hanton (2006), Jones, Meijen, McCharty and Sheffield (2009) or Ponseti (2017), when they report that the competitive level influences the states of anxiety presented by athletes and their levels of self-confidence. In this regard Martens et al. (1990), Mellalieu, Hanton and O'Brien (2004), Arbinaga and Caracuel (2005) or Pozo (2007) report that the literature shows higher levels of anxiety on the part of younger athletes, explained by less competitive experience and shorter practice time. Other authors such as Detanico and Santos (2005) and Souza et al. (2012) and Munhóz and Teixeira-Arroyo (2012) corroborate the earlier idea that older or more experienced athletes have lower levels of anxiety than younger and less experienced athletes, since athlete anxiety tends to decrease with increasing age and seems highly likely that the years of experience accumulated in the practice of a specific sport can lead the individual to deal better with this situation. Duda et al. (1995) go even further by stating that the highest

moment of anxiety levels corresponds to the time when athletes reach the peak of their physical potential in sport, where social status is very important.

Regarding situational factors (playing at home or away), the results showed that athletes from both competitive levels considered games to be important and difficult, both at home and away, but both attributed a degree of importance and difficulty superior to the games away, not having here significant differences between the athletes of the different competitive levels. Jaenes (2000) and Arbinaga and Caracuel (2005) report that the environment where the athlete is competing or the type and characteristics of the test may interfere with their anxiety levels. Courneya and Carron (1992) point out in this regard that in collective sports, the concept of home advantage is related to the greater probability of victory, having the psychological state and the behavioural state of the athletes influencing this fact. Terry, Walrond and Carron (1998) also report that game location may influence athlete's anxiety levels, as well as the competence of the opponent (Thuot, Kavouras & Kenefick, 1998) Early-stage athletes had higher levels of pre-competitive (somatic, cognitive) anxiety in home games, while senior athletes had higher levels of cognitive anxiety and lower levels of somatic anxiety in away games. In none of the levels were significant differences found comparing games played at home and away.

The Under 12s athletes had pre-competitive (somatic, cognitive) anxiety levels higher in home games, while senior athletes had higher levels of cognitive anxiety and lower levels of somatic anxiety in away games. Clarke and Norman (1995), Pollard and Pollard (2005), Wolfson, Wakelin and Lewis (2005) demonstrated that factors such as public influence, support intensity and better knowledge of the terrain may be important and influence the attitude of players and lower their anxiety levels, although Román and Savoya (2003) and Ribeiro, Dias, Cruz, Corte-Real and Fonseca (2014) refer that the athletes who perceive the competition as being of high complexity showed higher levels of anxiety. In none of the levels were found significant differences comparing games performed at home and away from home. However, due to the magnitude of the effect, at the children's level, a high effect on cognitive anxiety, somatic anxiety and self-confidence is highlighted, because the game is played at home. Fernandes and Nunes (2006) report that athletes who compete for competitions away from home tend to have higher levels of pre-competitive anxiety, which was not observed with the athletes of the «under 12s» in our study. One possible explanation for this result is that of Ekeland, Heian, and Hagen (2005), which point among other factors that can raise the anxiety levels of children and young people in sport is if it can indicate the presence of the family, who often urge for efficiency and good, high performance during the game. Duda et al. (1995) tell us that the parents of athletes are the first and usually the most direct source of external influences on the athlete.

Regarding situational factors (location of games) at the level of self-confidence, both teams showed higher values in games played away, although there were no statistically significant differences. Fernandes, Nunes, Raposo and Fernandes (2014) observed that competitive experience can exert a significant multivariate effect on the dimensions of

competitive anxiety. The authors report that practitioners with low competitive experience were more predisposed to lower levels of self-confidence. We also verified that there are positive correlations between the importance and the difficulty attributed to the games, observing statistically significant superior differences in the seniors. It is possible to mention that there are positive correlations between cognitive anxiety and somatic anxiety, with statistically significant differences in both levels. According to Neil, Mellalieu and Hanton (2006) who also obtained similar results, predicted that the greater the cognitive anxiety in games, the greater the somatic anxiety, effects which were also presented in studies by Lundqvist, Kentta and Raglin (2011) or Vinhais (2013). Also to appreciate the tendencies of the studies by Lundqvist, Kentta and Raglin (2011) we also found in our study negative correlations between cognitive anxiety and self-confidence presenting the same statistically significant differences for both teams. Based on the assumption that cognitive anxiety is considered as a negative concern about performance, the inability to concentrate and the lack of attention on the part of the athletes, as the literature indicates, we consider it natural for lower levels of self-confidence. Finally, we found that there are statistically significant negative correlations between somatic anxiety and self-confidence in both groups. Martens (1982) confirms this result when he states that self-confidence correlates negatively with cognitive and somatic anxiety. According to the author, as the values of anxiety and self-confidence are related, whenever there is an increase in anxiety values, a decrease in self-confidence may be expected.

The interpretation of the results in the linear regression carried out in both levels, the importance of the game did not prove a strong predictor of anxiety and self-confidence. The difficulty of the game, although in a low percentage, seems to exert some effect in the prediction of pre-competitive anxiety and self-confidence in the senior level. Neil, Mellalieu and Hanton (2006) point out that the competitive level may influence the state of anxiety, but they advert to the lack of research support that allows a complete interpretation of the phenomenon in athletes, as well as Román and Savoya (2003) there is no concrete evidence to assert with confidence that the level of competition is a determining factor for the increase in anxiety levels in athletes.

## Conclusions

The present study had as objectives to verify if the importance of the game, the difficulty of the game, the precompetitive anxiety (somatic and cognitive) and the levels of self-confidence are influenced by the competitive range of the athletes (children / seniors) and by the location of the games (home / away), and to know the correlation between importance, difficulty of the game, anxiety (somatic and cognitive) and self-confidence.

We can conclude that regardless of the competitive level (children or seniors) the athletes attributed high levels of importance and difficulty to the games. We could confirm in this study that cognitive and somatic anxiety levels are higher in «under 12s» teams compared to senior teams, although there are no significant differences. That the levels of self-

confidence are higher in the senior football teams and there are significant differences in relation to the «under 12s» football teams. In relation to levels of pre-competitive anxiety (somatic and cognitive), these are superior in «under 12s» teams in home and away games, and, compared to senior team, there were no statistically significant differences, but still in the «under 12s» team an advantage is noticed in the average values of anxiety, in the games at home. As far as self-confidence in home and away games is concerned, in «under 12s» teams compared to seniors, there are no statistically significant differences, having a slight difference in the average values in the home games with these being slightly higher for seniors. That the levels of pre-competitive anxiety (somatic and cognitive) are lower in more experienced athletes compared to less experienced athletes, although no statistically significant differences have been observed, the average values obtained are lower in more experienced teams. It was also verified that the levels of self-confidence are higher in more experienced athletes compared to less experienced athletes, observing statistically significant differences of superior self-confidence in the more experienced athletes. That the levels of importance and difficulty of the games are superior in «under 12s» teams compared to senior teams, where there are statistically significant differences, being higher in «under 12s» teams. We also verified that there are positive correlations between importance and difficulty by observing statistically significant superior differences in the senior athletes. It is possible to mention that there are positive correlations between cognitive anxiety and somatic anxiety, with statistically significant differences in both levels. That there are negative correlations between cognitive anxiety and self-confidence finding statistically significant differences for both levels. And finally, there are negative correlations between somatic anxiety and self-confidence that are statistically very significant at both levels.

The importance and the difficulty residually explain in the levels of «under 12s» and seniors the states of anxiety and self-confidence. It should be noted, however, that at the senior level the perceived difficulty of the games, although reduced, seem to exert some influence in the states of anxiety. Considering the tendency of the values obtained in this study, in line with what the literature suggests, we consider that more specific work must be performed to lower the cognitive anxiety levels of young players. This reduction will promote an increasingly sustained and realistic increase of self-confidence, promoting an extension of the competitive active life in the players who are now in the process of sports training. The training tasks that present an increasing difficulty will be important as strategies, contemplating in each young player the autonomy of action and the attitudes that strengthen the perception of their technical and tactical competence. We also emphasize the importance of formulating objectives based on process or performance rather than results-based. In this way, the performance is analysed according to the positive aspects achieved in training and competition and not only focused on the result given by the scoreboard at the end of a game. This strategy allows for superior regulation of the motivation of the athletes, particularly the young ones. Regular extra competitive ca-



lendar games may also be favourable in reducing anxiogenic factors and increase self-confidence.

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